Amendments to the Drawings:

None.

REMARKS/ARGUMENTS

Claims 1-12 are pending in this application and stand rejected. Claims 13-15 were added in Applicant's previous Amendment, and new claims 16-20 have been added in this Amendment.

In the Office action mailed December 16, 2004, the Examiner rejected claim 1-4 and 10-12 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,725,794 to Bruhnke et al. Claims 5-9 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,725,794 to Bruhnke et al. ("Bruhnke '794").

In Applicant's reply dated May 16, 2005, Applicant respectfully traversed the rejections. In further support of the reply dated May 16, 2005, Applicant submits with this supplemental response a declaration from inventor Naoshi Ito. Mr. Ito's declaration shows that the present application is patentable over Bruhnke '794.

Mr. Ito is one of the inventors of the above-referenced patent application. He Graduated in 1994 from Gifu University, Faculty of Engineering, Department of Applied Chemistry. (Ito Declaration, ¶ 3) In 1994, he joined Shishiai-Kabushikigaisha (CCI Corporation) in the Chemical Engineering Group, Engineering Department. (Ito Declaration, ¶ 3) Mr. Ito has eleven years of experience in the research and development of automobile engine coolants. (Ito Declaration, ¶ 3)

Mr. Ito conducted tests to directly compare the electrical conductivity of the compositions of the above-referenced patent application, and the compositions disclosed

in Bruhnke '794. (Ito Declaration, ¶ 4) Mr. Ito tested three compositions of the present invention and four compositions of Bruhnke '794. (Ito Declaration, ¶ 7)

The test results show a remarkable difference in the electrical conductivity of the present invention and Bruhnke '794. The three compositions of the present invention were shown to have electrical conductivities of 0.6, 0.8, and 0.4 µS/cm, while the compositions of Bruhnke '794 had electrical conductivities of 16, 25, 14 and 19 µS/cm. (Ito Declaration, ¶ 7) As such, the electrical conductivities of the Bruhnke '794 compositions are approximately thirty times greater than that of the present invention. The difference is of both statistical and practical significance. (Ito Declaration, ¶ 8) The significantly lower electrical conductivity of the present invention is of particular benefit in its intended use as a coolant for a fuel cell. (Ito Declaration, ¶ 8)

Bruhnke '794 is directed to an antifreeze composition for use in internal combustion engines. Bruhnke '794 does not disclose use as a fuel cell coolant. The high electrical conductivity of the Bruhnke '794 compositions would not be problematic for their intended use in internal combustion engines. However, such high electrical conductivity would not be acceptable for a fuel cell coolant as it would result in loss of electric power in the fuel cell. Therefore, the low electrical conductivity of the present invention makes it particularly suitable for use as a fuel cell coolant.

The results of Mr. Ito's tests confirm that Bruhnke '794 does not disclose claim 1 of the present application, because Bruhnke '794 does not disclose a composition to be

blended in coolant for cooling a fuel cell stack, comprising a base material and a dye which maintains the electrical conductivity of the coolant at 10 μS/cm or lower at 25°C.

The test results also show that the dyes used in present invention and Bruhnke '794 are not equivalents, and that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to use the dyes recited in claims 6-8 and 16-20. Mr. Ito's test is evidence that the present invention yields unexpected and superior results over Bruhnke '794 with regard to electrical conductivity. (Ito Declaration, ¶ 6) Evidence that a compound is unexpectedly superior in one of a spectrum of common properties can be enough to rebut a *prima facie* case of obviousness. M.P.E.P. § 716.02(a)(II).

For the reasons stated above, Applicant submits that the application is in a condition for allowance. Therefore, Applicant respectfully requests that a timely notice of allowance be issued in this case.

Respectfully submitted,

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I hereby certify that this correspondence is being facsimile transmitted to the United States Patent Office, Facsimile No. 571-273-8300 on July 22, 2005.

Myra Howell 7/22/05
Myra Howell Date of Signature